

REMARKS

Applicants respectfully request further examination and reconsideration in view of the above amendments and the arguments set forth fully below. In the Office Action mailed October 11, 2007, claims 1-14 and 20 have been rejected, claims 1, 6, 10 and 20 have been objected to and claims 15-19 have been allowed. In response, the Applicants have submitted the following remarks and amended claims 1, 6, 10, 15 and 20. Accordingly, claims 1-20 are still pending. Favorable reconsideration is respectfully requested in view of the amended claims and the remarks below.

Examiner Interview Summary

On Tuesday, October 23, 2007, Examiner John Morales, Primary Examiner Carl Layno and Attorney Christopher M. Scherer conducted a telephone interview. The Applicants respectfully thank the Examiners for their time and attention during the interview. During the interview, the Examiners and the undersigned discussed the rejections to the independent claims, and while an agreement was not specifically reached, the Examiners agreed that minor clarification amendments may render the rejected independent claims allowable over the cited prior art. By the above amendments, the Applicant has amended the rejected independent claims to show these clarifications.

Furthermore, the previously allowed independent claim 15 was discussed and the Primary Examiner Carl Layno suggested that additional limitations be added to this claim. By the above amendments, the Applicants have amended this claim to follow the Examiner's suggestion. Therefore, the Applicant respectfully submits that the claims are now in a condition for allowance.

Claim Objections

Claims 1, 6, 10 and 20 have been objected to due to an informality, wherein the word "input" should read "implant" in each of the independent claims. By the above amendments, the Applicants have amended these claims to correct this typographical

error. Therefore, the Applicant respectfully requests that the Examiner remove the objection to claims 1, 6, 10 and 20.

Rejections Under 35 U.S.C. §102

Claims 1-2, 6, 9-11, and 20 have been rejected under 35 U.S.C. §102 (b) as being anticipated by U.S. Patent No. 5,948,005 to Valikai. (hereinafter Valikai). The Applicants respectfully disagree with this rejection.

By the above amendments, the Applicants have made the clarification amendments as requested by the Examiner. Furthermore, the Applicants wish to include the renewed arguments for the allowability of these claims below.

Within the Office Action, it is stated that Valikai does teach means collecting non-implant data. It is further stated that Valikai teaches a physiological sensor being coupled either within the pace maker or just coupled externally from the pacemaker in column 5, lines 32-39. It is further stated that this sensor either way senses data such as physical activity, respiration rate, or blood oxygen level in column 1, lines 58-64, and column 7, lines 9-28.

Referring to column 5, lines 32-39 of Valikai, an implantable pacemaker 16 with an associated physiological sensor 26 is shown in Figure 1. It is noted in this passage that not all pace makers have a physiological sensor 26, and that some pace makers include a sensor inside of the pace maker 16. Furthermore, it is noted that some pacemakers have a physiological sensor that is pre-programmed to an off or passive mode. Referring now to the cited passage in column 7, the physiological sensor 26 sends a sensor input signal to the pace maker 16, wherein the sensor input signal is processed and used to alter or adjust the basic time intervals of the pace maker so that the pace maker will provide simulation pulses on demand at a faster or slower rate as needed. Referring lastly to the cited passage in column 1, it is noted that the sensor inputs vary from patient to patient caused by numerous factors including physical structure, age, sex, implant site, disease the patient has and its progression within the patient's heart or other body tissue. While the

Valikai reference includes a physiological sensor 26 in a number of the figures, including Figure 1 and Figure 2, all of the physiological sensors 26 shown in the figures or taught in the cited and discussed passages, are either directly coupled to the implantable device 16, or integrated within that same implantable device 16. The Valikai reference does not teach, nor is it possible within the structure of the system of the Valikai reference, to include a physiological sensor 26 that is a non-implant sensor device, that is not coupled or integrated into the implantable device 16, and collects non-implant physiological data from the surface of the patient and sends that data to a means for synchronizing and correlating the data with the data from the implantable device. The Valikai reference merely shows a physiological sensor 26 that is coupled to, or integrated with the implantable device 16.

In contrast to the teachings of Valikai, the system and method of the present disclosure correlates non-implant physiological data from the surface of a patient to what the implantable device is collecting internally in the patient's body. This is important when there is a event that can be seen from the non-implant data taken from the surface of the patient that the implant data is recording at the same time from the implantable device. This correlation between the two devices allows a physician to stop listening to the implant and merely look at the non-implantable sensor to find the feature or event again such that power absorption from communicating with the implantable device is minimized. As discussed above, the Valikai reference does not teach a non-implant sensed device that is not coupled or integrated with the implant device, and is configured to send the non-implant cardiac data to an analysis module that is configured to correlate the non-implant data with the implant data. This configuration and method is not taught in the Valikai reference. As will be discussed below, the claims have been amended to further clarify and set forth these distinctions from the Valikai reference.

Claim 1 is directed to a method of analyzing cardiac data acquired from a patient having an electronic cardiac implant, the method comprising: acquiring non-implant cardiac data from the patient with a non-implant sensor device; sending the non-implant

cardiac data to an analysis module; acquiring implant cardiac data from the electronic cardiac implant, wherein the non-implant sensor is not coupled with the electronic cardiac implant; sending the implant cardiac data to the analysis module; synchronizing the non-implant cardiac data and the implant cardiac data; correlating the non-implant cardiac data with the implant cardiac data to determine a cardiac condition of the patient, wherein the correlating step is carried out with a correlating algorithm; and outputting to a display a signature pattern of the patient. As described above, Valikai does not teach an implant device and a separate non-implant device, both collecting separate data and sending the same to analysis module for correlation. For at least these reasons, the independent claim 1 is allowable over the teachings of Valikai.

The Applicants respectfully submit that the independent claims 6, 10 and 20 also include the limitations of an electronic cardiac implant, that as described above, is not taught in the Valikai reference. For at least these reasons, the independent claim 6, 10 and 20 are also allowable over Valikai.

Claim 2 is dependent upon the independent claim 1. As discussed above, the independent claim 1 is allowable over the teachings of Valikai. Accordingly, claim 2 is also allowable as being dependent upon an allowable base claim.

Claim 9 is dependent upon the independent claim 6. As discussed above, the independent claim 6 is allowable over the teachings of Valikai. Accordingly, claims 7-9 are also allowable as being dependent upon an allowable base claim.

Claim 11 is dependent upon the independent claim 10. As discussed above, the independent claim 10 is allowable over the teachings of Valikai. Accordingly, claim 11 is also allowable as being dependent upon an allowable base claim.

Rejections Under 35 U.S.C. §103

Claims 3 and 12 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Valikai as applied to claims 1 and 10, and further in view of U.S. Patent No. 6,647,287 to Peel, III et al. (hereinafter Peel). Claims 3 and 12 are dependent upon the

independent claims 1 and 10. As discussed above, the independent claims 1 and 10 are allowable over the teachings of Valikai. Accordingly, claims 3 and 12 are also allowable as being dependent upon an allowable base claim.

Claims 4 and 13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Valikai as applied to claims 1 and 10, and further in view of U.S. Publication No. 2005-0103351 to Stomberg et al. (hereinafter Stomberg). Claims 4 and 13 are dependent upon the independent claims 1 and 10. As discussed above, the independent claims 1 and 10 are allowable over the teachings of Valikai. Accordingly, claims 4 and 13 are also allowable as being dependent upon an allowable base claim.

Claims 5 and 14 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Valikai as applied to claims 1 and 10, in further view of U.S. Patent No. 4,616,333 to Shimoni (hereinafter Shimoni). Claims 5 and 14 are dependent upon the independent claim 1 and 10. As discussed above, the independent claims 1 and 10 are allowable over the teachings of Valikai. Accordingly, claims 5 and 14 are also allowable as being dependent upon an allowable base claim.

Claims 7-8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Valikai as applied to claim 1, and further in view of U.S. Patent No. 6,647,287 to Peel, III (hereinafter Peel). Claim 7-8 are dependent upon the independent claim 1. As discussed above, the independent claim 1 is allowable over the teachings of Valikai. Accordingly, claims 7-8 are also allowable as being dependent upon an allowable base claim.

Allowable Subject Matter


Within the Office Action, it is stated that claims 15-19 have been allowed. However, as discussed above, during the telephone interview the Primary Examiner suggested additional limitations to the allowed claim 15. By the above amendment, the Applicant has included these new limitations, and therefore respectfully requests that the claims 15-19 are allowable over the cited prior art.

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For these reasons, Applicants respectfully submit that all of the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at 414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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